

REMARKS

The Office Action dated November 5, 2003, has been received and carefully noted. The above amendments and the following remarks are submitted as a full and complete response thereto. By this Amendment, claim 11 has been further amended to more clearly particularly point out and distinctly claim the invention. No new matter has been added. Accordingly, claims 2-9 and 11 are pending in this application and are submitted for consideration.

Applicants acknowledge and thank the Examiner for indicating that claims 3, 5 and 6 would be allowable over the prior art if amended to be in independent form. However, Applicants respectfully submit that all of the pending claims recite allowable subject matter. Therefore, placing claims 3, 5 and 6 in independent form is unnecessary

Claims 2, 8 and 9 were rejected under 35 U.S.C. § 102(b) as being anticipated by Stewart et al. (U.S. Patent No. 5,302,966, "Stewart"). In making this rejection, the Office Action took the position that Stewart discloses all the elements of the claimed invention. However, Applicant respectfully submit that claims 2, 8 and 9 recite subject matter neither disclosed nor suggested by the prior art.

Claim 2 recites a display device that includes a display element and a control element for controlling a voltage or a current to be applied to the display element to drive the display element. A nonvolatile data holding section is integrated with the control element or connected to the control element and is capable of holding control data of the control element in a floating state. The control element is formed of a MOS transistor type element. One of a drain and a source of the MOS transistor type

element is connected to the display element and the other is connected to a driving line. A gate side of the MOS transistor type element is connected to a control line through the nonvolatile data holding section, and plural sets of the display element. The control element and the nonvolatile data holding section are formed as each pixel in a matrix.

In making this rejection, the Office Action took the position that Stewart discloses all of the elements of the claimed invention. However, it is respectfully submitted that the prior art fails to disclose or suggest the structure of the claimed invention, and therefore, fails to provide the advantages of the present invention. For example, the display device of the present invention is configured to include a nonvolatile data holding section integrated with said control element or connected to the control element and capable of holding control data of the control element in a floating state.

As a result of the claimed configuration, power consumption is reduced.

Stewart discloses an active matrix electroluminescent display. As shown in Fig. 2, the gate of first transistor 44 is connected a select line 46, the source is connected to data line 48 and the drain is connected to the gate of second transistor 50. Capacitor 51 is connected between the gate of the second transistor 50 and the source of reference potential. The source of transistor 50 is connected to data line 48 and the drain is connected to one electrode of an EL cell 54. The second electrode of the EL cell 54 is connected to bus 58. Parasitic capacitor 60 is connected between the gate and drain of transistor 44.

However, Stewart fails to disclose or suggest the nonvolatile data holding section, as recited in claim 2 of the present invention. The Office Action took the position that reference numeral 60 of Stewart denotes a nonvolatile data holding section

but as discussed above, reference numeral 60 is a parasitic capacitor between the gate and drain of the transistor 44 (see column 2, lines 63 to 64 and Fig. 2). Thus, as a parasitic element, no part is connected between the gate and drain and Stewart only mentions the capacitive constituent generated between the gate and drain of the transistor. Thus, it is unclear as to how the data be can be held in a nonvolatile manner between the gate and drain of the transistor.

In addition, the nonvolatile data holding section according to the present invention is connected between a gate side of a transistor type element and a control line, as recited in claim 2, whereas reference numeral 60 of Stewart is located between the selection line 46 and the gate of the second transistor 50. In order to have the same construction as that of the present invention, reference numeral 60 of Stewart would have to be connected between the data line 48 and the gate of the transistor 50.

Therefore, it is respectfully submitted that the Applicants' invention, as set forth in claim 2, is not anticipated within the meaning of 35 U.S.C. § 102.

As claims 8 and 9 depend from claim 2, Applicants respectfully submit that each of these claims incorporate the patentable aspects thereof, and are therefore allowable for at least the same reasons as discussed above.

Claim 7 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Stewart in view of Taguchi et al. (Publication No. U.S 2002/0153881, "Taguchi"). In making this rejection, the Office Action took the position that Ozawa discloses all the elements of the claimed invention, except for disclosing that the nonvolatile data holding section is constituted by an element utilizing a magnetoresistance effect. Taguchi is cited for curing the deficiencies of Stewart.

However, as discussed above, Stewart fails to disclose or suggest the claimed invention. Taguchi fails to rectify the deficiencies of Stewart.

Therefore, Applicants submit that Stewart and Taguchi, either alone or in combination, fail to disclose or suggest the claimed invention and respectfully request that the rejection be withdrawn.

Still further, because claim 7 is dependent on claim 2, Applicants submit that this claim recites subject matter that is neither disclosed nor suggested by the cited prior art, for at least the reasons set forth above with respect to the independent claim.

Claims 4 and 11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Stewart in view of Adachi et al. (U.S. Patent No. 5,631,664, "Adachi").

Regarding claim 4, the Office Action took the position that Stewart discloses all the elements of the claimed invention, except for disclosing that the nonvolatile data holding section is formed of a ferroelectric capacitor. Adachi is cited for teaching this limitation.

Regarding claim 11, the Office Action took the position that the combination of Stewart and Adachi discloses all the elements of the claimed invention.

Firstly, Applicants' claim 11 recites that the control data is written to the nonvolatile data holding section by using the control line and the ground or the write line. Stewart fails to disclose or suggest this feature.

Secondly, Adachi fails to rectify the deficiencies of Adachi. Adachi discloses an electron beam generating cell that uses a ferroelectric capacitor (electron beam generating element). An electron beam is generated by reversing the polarization of the ferroelectric material. Adachi makes the best of the involatility of the ferroelectric

capacitor and discloses that the capacitor is operated as a storage memory. However, as shown in Fig. 13 of Adachi, the ferroelectric capacitor 22a is connected in series to the source or drain of switching transistor 25 in order to reverse the polarization and generate electron beams. This configuration is contrary to that recited in claims 2 and 11 of the present invention where the nonvolatile data holding section is between the gate side of a MOS transistor type element and a control line. Thus, Adachi cannot achieve the object of rewriting the data only for pixels whose display data is changed and storing the data for pixels whose display data is not changed no matter how many times pixels are displayed, which is one of the benefits of the present invention that saves electric power.

In Adachi, if the ferroelectric capacitor is connected to either the source or drain of the switching element, the data is destroyed every time the data is read out and the data must be written in each case. (See column 11, line 14 to 17 of Adachi).

Therefore, as discussed above, Applicants submit that Stewart and Adachi, either alone or in combination, fail to disclose or suggest the claimed invention.

Thus, it is respectfully submitted that the Applicants' invention, as set forth in claims 4 and 11 is not obvious within the meaning of 35 U.S.C. § 103.

Still further, because claims 4 and 11 are dependent on claim 2, Applicants submit that each of these claims recite subject matter that is neither disclosed nor suggested by the cited prior art, for at least the reasons set forth above with respect to claim 2.

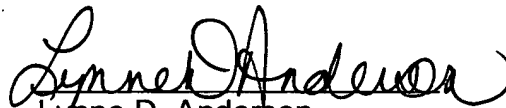
In view of the foregoing, reconsideration of the application, withdrawal of the outstanding rejections, allowance of claims 2-9 and 11 (claims 3, 5 and 6 already being

indicated as reciting allowable subject matter, and the prompt issuance of a Notice of Allowability are respectfully solicited.

If this application is not in condition for allowance, the Examiner is requested to contact the undersigned at the telephone listed below.

In the event this paper is not considered to be timely filed, the Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing docket number 107400-00021.**

Respectfully submitted,



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